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ABSTRACT

National education policy reforms often do not translate into changes at the classroom level. This paper presents a conceptual framework developed for Sub-Saharan Africa to assist policy-makers in bridging the gap between school practice and national policies. It also describes how the framework was applied to current school-improvement efforts in Madagascar. The framework identified 16 school-effectiveness factors and divided them into five main categories--supporting inputs, enabling conditions, school culture and climate, and the teaching/learning process. The Madagascar Quality Study, conducted as part of a larger World Bank research effort, sought to identify the school-level factors that most influence student learning and academic persistence. The World Bank report relied on three different studies to assess the quality of primary and secondary education in Madagascar: (1) the Quality Study, a case-study analysis of 36 schools 12 at each of the primary, junior secondary, and senior secondary cycles of the system; (2) a quantitative assessment of the achievement scores of 2,874 students in 181 primary schools, conducted by the French government; and (3) a quantitative study on dropouts, conducted by the Ministry of National Education. Findings indicate that three key factors affected primary schools--school leadership, community participation, and teachers' guides/textbooks. It is recommended that improvement efforts at the primary level should focus on strengthening school leadership, providing more learning materials, and fostering community support. Other suggestions include: (1) create and sustain a positive climate for educational reform; (2) give primary and secondary education priority over higher education in budget allocations; (3) favor instructional purposes in budget allotments; and (4) invest in more and better facilities and equipment. Three figures and one table are included. The appendix contains examples and indicators of school effectiveness. Contains 11 references. (LMI)

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# A Framework for Using Qualitative Research to Inform Policy-Makers and Empower Practitioners: Lessons From Madagascar

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# A Framework for Using Qualitative Research to Inform Policy-Makers and Empower Practitioners: Lessons From Madagascar

> The effectiveness of schools is seen not to lie in the specific list of characteristics of discrete additive elements, but in the creation of a whole efficient working system, which includes its people, structure, relationships, ideologies, goals, intellectual substance, motivation and will.
>
> Lightfoot (1983)

There is an abundance of literature which examines the features of effective schools and school improvement programs and which provides the basis for linking research and policy in education. The real value of this research literature is evident when it is used to put policy into practice to improve the quality of education, and more specifically, to raise student achievement. But translating national educational policy reforms into changes in what teachers and students do in the classroom is difficult. National reforms tend to focus on the linkage between educational inputs and student achievement. While some changes in the quality of education may occur with this approach, there are not necessarily effective changes at the classroom level where student learning occurs. New paradigms for educational planning are needed that adequately recognize the nature of the school enterprise and provide guidelines to make the connection between school practice and national policy (Verspoor, 1992).

This paper draws upon the school effectiveness research in both industrialized and developing countries. It presents a conceptual framework that has been developed for Sub-Saharan Africa to assist policy-makers in bridging the gap between school practice and national policies using the research results to foster improvements at the classroom level. The framework provides the basis for undertaking needs assessments, planning and evaluation. It is envisaged that this framework can be applied, with modifications, to any school situation. Secondly, this paper illustrates the utility of this framework by describing its application to work in progress to improve the quality of primary and secondary education in Madagascar.

The work reported in this paper offers lessons primarily in four areas. The first area is identifying the school effectivness factors that might most effectively facilitate a school improvement strategy using Madagascar as an example. The second area is highlighting the importance of qualitative field observations to inform more quantitative analyses in the belief that one approach without the other provides an incomplete picture of the educational analysis. The third lesson is that people without sophisticated research skills can use the framework to structure

comprehensive information for policy decisions; and the fourth is that practitioners can be empowered to thoughtfully and effectively talk about their own educational systems by using the framework.

## BACKGROUND

This project began as an attempt to respond to the shortcomings of policies and investments that have sought to improve the quality of primary education in Sub-Saharan Africa. It was seen that recent attempts at improving the quality of African primary education, including those to which the World Bank contributes, have tended to rely on national educational policy reforms and on investments that do not directly address school-level needs. National policies heavily linked to educational inputs were expected to change classroom practices. However, the impact on children's learning is usually limited when changes depend on policy and ignore the internal life of schools (Craig, 1990; Verspoor, 1989).

The classroom use of new materials, changes in teacher behavior, and improvements in academic achievement have not occurred satisfactorily in Sub-Saharan Africa even when well-organized investments are made for school-construction (with or without expectations of community input), textbooks and teacher materials, a new language of instruction, or training programs for teachers.

It has become evident that the assumptions underlying methods of planning and evaluation that are oriented towards policy directives and the provision of inputs only are questionable. We believe that if schools are to improve then the school needs to be the unit of focus for analysis and planning, and the processes within the schools need to be considered as important as the inputs. The conceptual framework and the guidelines for its use which developed as a result of this investigation respond to this belief. They are based on a review of the significant body of research on school effectiveness and school improvement[1]. While much of this research is based on investigations in industrialized countries, the limited research in these same areas in developing countries suggests that the findings are applicable, with adaptations, to schools in developing countries.

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[1] This framework and the guidelines for its use are presented in the publication: Heneveld, W. (1994). Planning and Monitoring the Quality of Primary Education in Sub-Saharan Africa. Washington D.C.: The World Bank.

## THE CONCEPTUAL FRAMEWORK

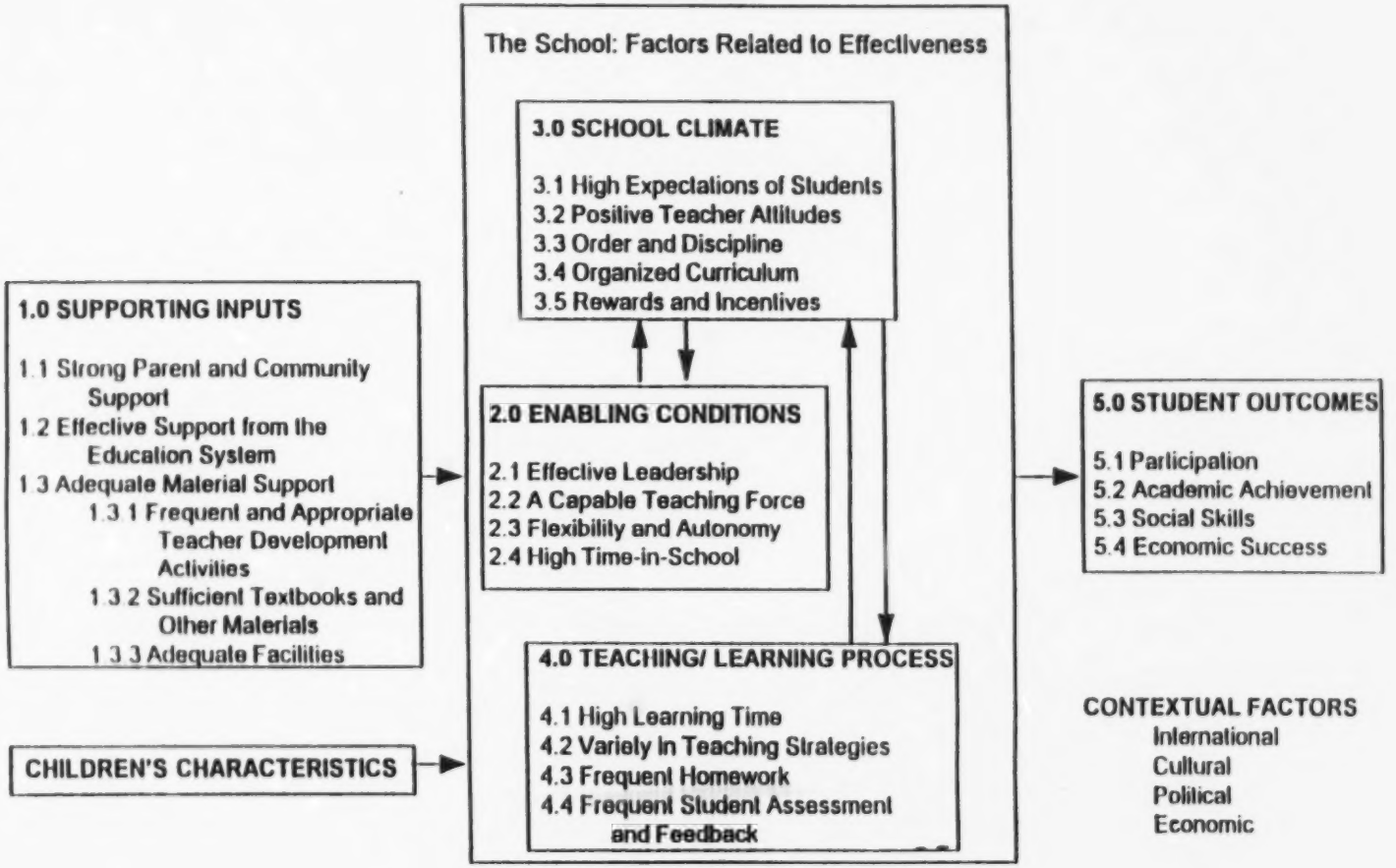
Research on effective schools supports the widely held assumption that schools can make a significant conribution to student learning even taking into account family and socioeconomic variables. However, if such a contribution is to be made, the assumption that the right mix of inputs will lead by itself to changes in student performance must give way to the realization that the educational process in individual schools determines how effective the inputs will be for students' learning.

The conceptual framework of factors that determine school effectiveness presented in this paper is based on two notions. First, the school is a social system. It is characterized by a clearly defined population, a complex network of formal and informal social relationships, its own unique culture within the larger school/community environment, and an interdependence of parts, within the school. All the school's elements form a single social entity (Hoy and Miskel, 1987). The behavior which occurs within the organization is determined by the interactions of the organization's expectations, informal norms, individual needs and motives, and organizational goals.

The second important notion is that the interactions among the various factors that are characteristic of effective schools are complex. There are a variety of these factors both material and social, that influence student achievement. Some of the factors are external to the school while many of them occur within the school and within the individual classrooms. The relationships among these factors are complex and unique to each school.

To help simplify the relationship among the most commonly-cited school effectiveness factors in the research literature, the authors developed a conceptual framework (see Figure 1). The sixteen identified factors are divided into five main categories: supporting inputs, enabling conditions, school culture and climate, and the teaching/learning process, all of which are themselves influenced by the context of the surrounding school environment. The "Supporting Inputs" flow into each school where the "Enabling Conditions", "School Climate" and "Teaching/Learning Process" combine to produce student outcomes. While contextual factors including institutional, cultural, political and economic influences also act directly on children's learning, they have been considered exogenous factors in the conceptual framework and are not dealt with in detail at this time in the recognition that educators have little influence over these factors outside the school.

## Figure 1: Conceptual Framework: Factors that Determine School Effectiveness



From the literature review, definitions have been formulated for each of the sixteen factors, and generic indicators have been identified for each definition. Examples of the definitions and indicators can be found in Appendix 1. While the school effectiveness factors are considered applicable in the abstract to any school situation, they were written with the idea that they need to be modified by involved educators in each specific national or local context. In the first instance, the factors were modified with the African context in mind. As different African and Pacific countries have adopted this framework, they have made further modifications for their own contexts. Researchers and planners must formulate their own definitions and indicators for factors and decide on how to use them in a given national or local context. The conceptual framework provides a basis for the dialogue that leads to those decisions, giving attention to both inputs and processes. It must be remembered that the factors and their definitions and indicators from the research literature are potential contributors to school quality, not guarantors of quality in any setting, and that how the factors interact is as important as their existence in a school.

## THE RESEARCH STUDY IN MADAGASCAR

The example from Madagascar that is presented here is part of a larger sector study[2] at the World Bank which addresses more fully the economic, environmental, cultural and socio-political issues which influence school improvement in Madagascar. This section addresses the issue of how this sector study's qualitative research component, which was based on the ideas from the conceptual framework described above, was used along with other more quantitative research methods to make a thorough analysis of the quality of primary and secondary education in Madagascar.

The study focused on understanding the school-level factors which have the most influence on student learning and on whether students stay in school. The research team

[2] World Bank (1994). Madagascar: Towards a School-Based Strategy for Improving Primary and Secondary Education. Washington, D.C.: The World Bank

investigated the learning results achieved by children and of the input factors and process characteristics that make a significant contribution to the effectiveness of primary and secondary schools in Madagascar. The information derived from this investigation is currently being used in the ongoing dialogue in Madagascar concerning the reform of primary and secondary education there.

The following sections describe the setting in which the study was undertaken, summarize the methodology used, and present the study's findings and their implications for educational policy in Madagascar.

**The Setting**

Primary education in Madagascar is in crisis, and secondary education is losing students, particularly in public schools. Repeater and dropout rates are high, exceedingly so at the primary level where fewer than one in three children who enter the five-year cycle complete it; and the percentage of children passing terminal examinations in each cycle is below 50%. Furthermore, total enrollments in primary schools have fallen over the last ten years, and those in secondary schools have fallen over at least the last five years, despite a population growth rate of about 3%. It also appears that parents and their children, the consumers of education, are deserting the public education system. During the last five years enrollments in private primary and secondary schools have grown, while enrollments in public schools declined significantly.

The Government is seeking to address some of these issues by encouraging more decentralized responsibilities to the regions; supplying textbooks and other learning aids to primary schools throughout the country; and training personnel for improved teaching through better teacher preparation and supervision. However, the extent to which these interventions will influence what goes on in schools is uncertain because they are all supply factors from outside the school. Local input and process factors operating within each school are also important and have not been well understood in Madagascar. The quality study sought to define the factors that affect learning in Madagascar's schools and investigated the interaction among these factors at the school level.

## The Methodology

### *Defining Quality of Education*

This study focused on the quality of education defined as "an improvement in the environment in which the student [s] work [such that] this improved environment [produces] detectable gains in the knowledge, skills, and values acquired by students" (Ross & Mahlck, 1990:6). Educational quality is defined both in terms of the environment in which children learn, the school, and in terms of the learning outcomes from time spent in that environment.

### *Preparations*

As mentioned earlier, the design of this qualitative research developed from an earlier regional study which sought to provide guidelines to improve the quality of primary education in Sub-Saharan Africa. It was expected that the factors, definitions and indicators produced in the guidelines from that study would be modified with school improvement projects undertaken in specific countries such as Madagascar.

As the World Bank's need for sector work beyond the quantitative analyses already undertaken in Madagascar developed, dialogue between the Ministry of Education and the World Bank focused on identifying key factors at the school level. Other studies of primary education in Madagascar confirmed the need for an approach which focused on the school. A 1992 study of 181 primary schools and 2874 students entitled *Evaluation du Système Educatif Malgache* concluded that "the disparity of resources among schools does not explain, systematically, schools' difficulties. . . . The effectiveness of a school . . . lies in the quality of school life" (Robin et al., 1992:46). Similarly, a school mapping pilot study of one prefecture has noted provisionally that among its twelve communes "the best examination results, in public schools, are found in the communes with the worst or mediocre staffing and material conditions for schooling" (*Ministere de l'Education Nationale*, 1993:39). Thus, it was seen that something other than inputs was making a significant contribution to the effectiveness of these schools.

*The Process*

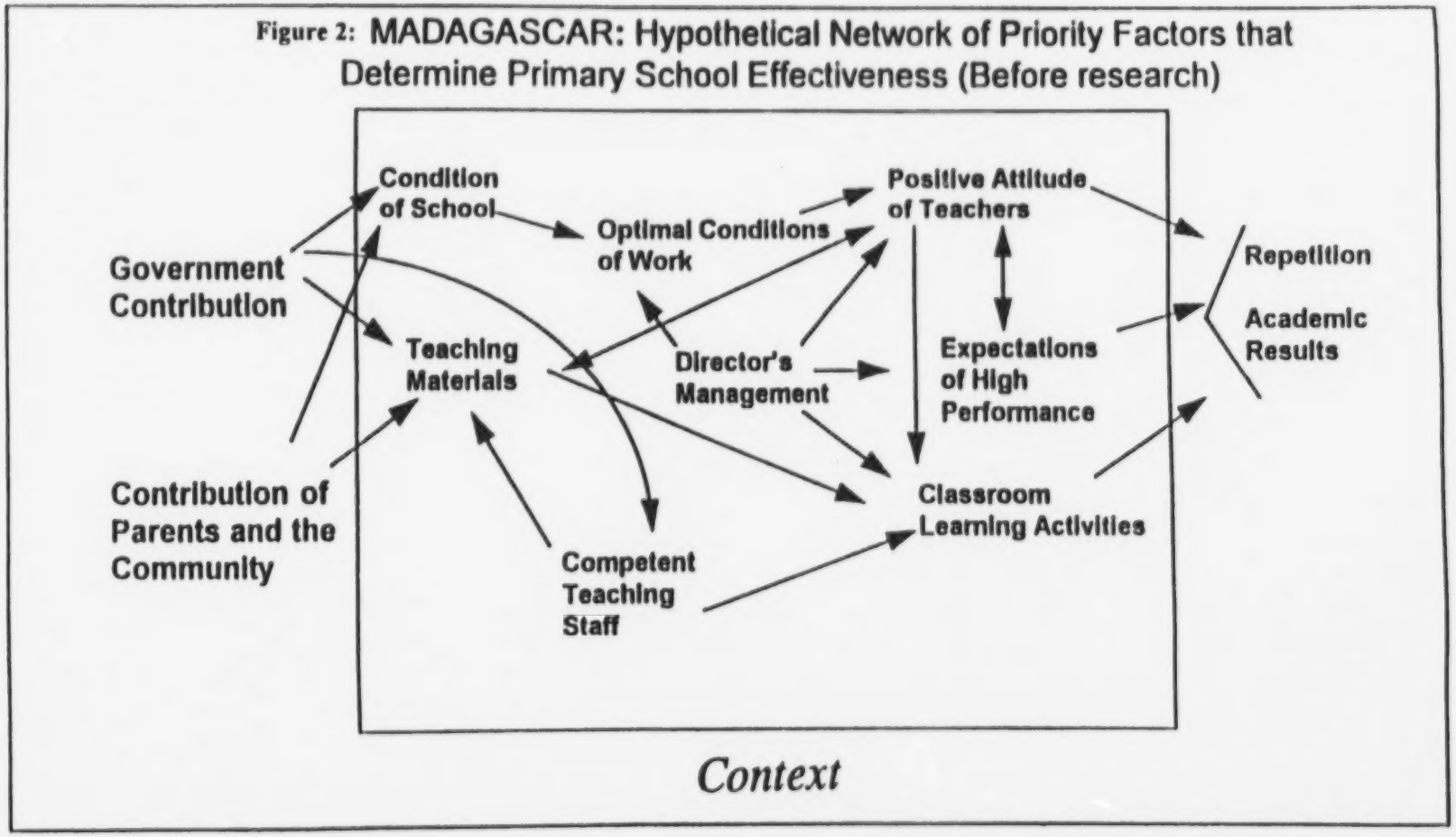
The results of three different studies were used to prepare the World Bank's report on the quality of primary and secondary education in Madagascar. The central study for both primary and secondary levels of education was a qualitative field study of 36 schools (hereinafter called the Quality Study) prepared with advice from the World Bank. Case studies were prepared on six schools in each of the six provinces, twelve at each of the primary, junior secondary and senior secondary cycles of the system. A Technical Group of fourteen Malagasys visited each school for two-three days in teams of two or three people and prepared a case study on each school using a "pre-structured case study" methodology developed by Matthew Miles (1990). The results of the analysis of the twelve case studies of primary schools were compared to two other sample-based quantitative studies, one on the factors that influence primary school achievement and one on variables that explain the variance among students in the number of years it takes them to reach Grade Two or Grade Five.

For the Quality Study, the Technical Group in the educational research and development unit of the Ministry of Education, *Unité d'Etudes et de Recherche Pédagogiques* - UERP, defined the dimensions of quality to be investigated at both the primary and the secondary levels. First, the UERP drafted a statement of expected student performance criteria (*profil de sortie*) by subject for completers of the primary, junior secondary (CEG) and senior secondary *(lycée)* cycles. Using these learning objectives, the Technical identified and defined the conceptual framework of input factors and process characteristics that they hypothesized influence the results of primary and secondary education. Figure 2 presents the set of factors that have been analyzed for the primary level and their relationship to each other.

The factors selected for study at both levels included:

* Supporting (input) elements: community contribution in terms of money, labor and materials; teaching support; and government support in terms of money and services;
* School (process) elements: leadership, pupil expectations, the capabilities and attitudes of teachers, school infrastructure and equipment, learning materials and the teaching/learning process;
* Student outcomes: pupil participation, academic results, social skills, and economic success.

Figure 2: MADAGASCAR: Hypothetical Network of Priority Factors that Determine Primary School Effectiveness (Before research)



The Technical Group wrote definitions and identified school-level indicators for each of these factors. A sample of two accessible urban and rural schools at each of the primary, junior secondary, and senior secondary levels was selected in each of the six regions, making a total of 36 schools. The most rural schools were not represented in the sample. The definitions and indicators of the factors served as the field guide (printed as *Guide d'Observation*) for three-day visits by two members of the Technical Group to each school, after which the field teams wrote a case study on each of the schools they had visited. The findings for each school on each factor were then combined to draw conclusions about the quality of the schools in the study. The same process was followed separately for the analysis of the twelve junior secondary and twelve senior secondary cases. In addition, the priority factors that the analyses uncovered were then discussed with local people in seven *journées de reflexion* held around the country; a two-and-one-half-day national seminar of leaders in the education sector was held in March, 1994, to discuss the results of the analyses; and the Technical Group wrote a final report.

Because only 36 schools were studied and they are not a random sample of all schools, the findings of the Quality Study need to be compared and corroborated by other more comprehensive research if policy choices are to be made using this research. At the primary level, two such studies are available, one on achievement and one on internal efficiency of student flows. Both studies were undertaken largely by non-Malagasy experts. In 1992, the French Government commissioned the *Centre International d'Etudes Pédagogiques* in Sevres, France, to do a study of primary education entitled *Evaluation du Système Educatif Malgache* (hereinafter, the Evaluation Study). The study tested 2874 pupils in 181 primary schools in Mathematics, French and Malagasy using tests designed for the study. Through interviews, information was also collected from teachers, school directors, students and parents. In the statistical analyses for two final reports, the researchers compared groups of respondents according to individuals' examination results (students and parents) or the schools' results (teachers and directors). The case studies of primary schools in the Quality Study were compared to this study's descriptive analyses of test results and to profiles of stronger and weaker students and schools to draw conclusions for this study on the quality of education.

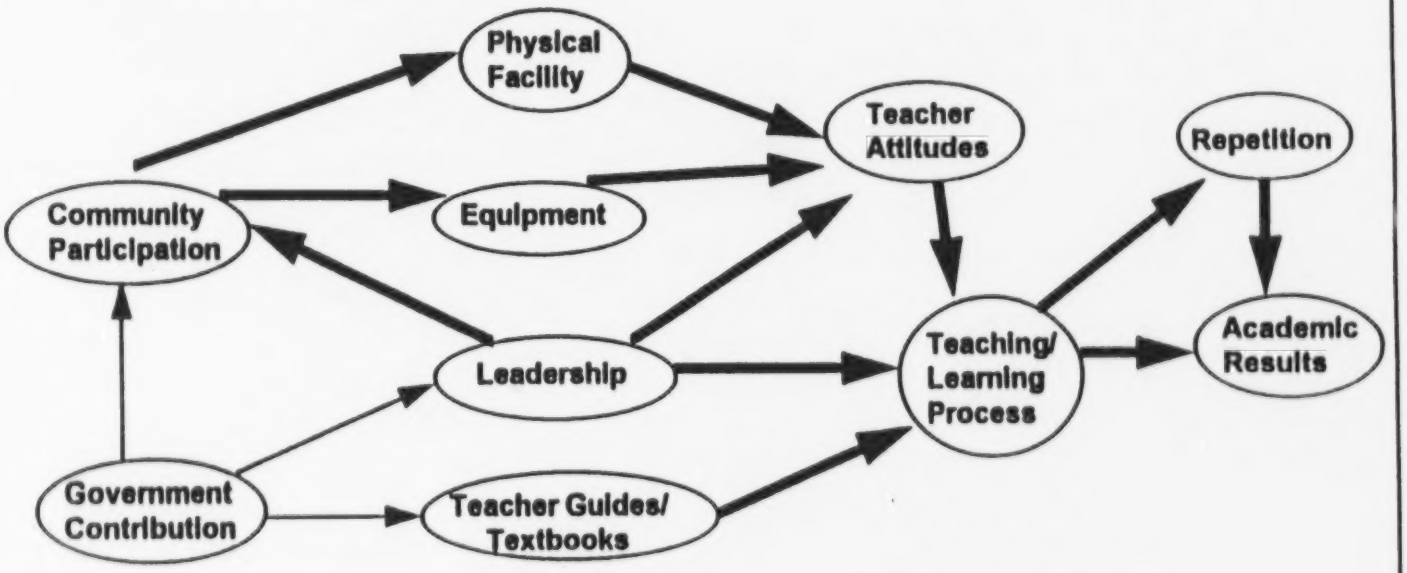
The World Bank's report has also been aided by the research being conducted by the Ministry of National Education within the framework of MAGPLANED, a program to strengthen the planning capacity within the Ministry of Secondary and Basic Education. Much of the statistical data analyzed in the World Bank's report comes from that work. Even more useful has been the preliminary analysis of data from a MAGPLANED study on repetition and dropouts that is being finalized (hereinafter, the Wastage Study). In this study, quantitative measures of

indicators in five categories of potential causes for repeating a grade or dropping out of primary school were defined, and data was collected on a sample of 4000 students in second grade and 2000 in fifth grade in 170 schools (30 of them private). The five categories of variables include family context, the characteristics of the child, accessibility of the school, characteristics of the child's class, and his or her school's characteristics. The research team calculated the variance explained by each of the variables in each of the categories in order to obtain a sense of the factors that are important in determining whether students will repeat or drop out. The World Bank report used a brief summary of the study's preliminary findings (*"Les Determinants du Redoublement et des Parcours Scolaire: Une Analyse Preliminaire," Ministère de l'Education Nationale*, Antananarivo, November, 1993) and a summary of the statistical analysis for comparisons with the results of the Quality and Evaluation Studies.

**Findings and Discussion**

While the Quality Study's findings on secondary education do not provide sufficient information for policy recommendations, the analysis of primary school quality in Madagascar across the three studies suggests generalizable findings. Three key factors affecting primary school quality stand out: school leadership, community participation, and teachers' guides and textbooks. The first two of these factors are critical to the life of the school, corroborating conclusions that material resources do not alone explain success. The analysis also found that teacher competencies and a primary school's facilities and equipment contribute to student success. However, these appear to be less critical than the three priority factors of school leadership, learning materials, and community support. Also, the importance of facilities and equipment is probably mainly a reflection of the community's very significant role in the life of the school (and the government's absence). Figure 3 summarizes the factors analyzed and depicts their estimated relation to each other based on the analysis of research results. "Government contribution" is included in the diagram, connected by thinner lines, to show where public resources, beyond teachers' salaries, would be best directed to strengthen the school factors that this study has found to be the most important. The sections that follow describe the analysis of the data that led to these conclusions.

Figure 3: MADAGASCAR: Conceptual Framework for a Strategy for the Reform of Primary Education (After Research)




Thick Arrows ( ⟶ ) show relations among factors from the research.

Thin Arrows ( → ) are the suggested foci for the government's strategy.

*Student Outcomes*

The best source of information on learning outcomes in Malagasy primary schools is the 1991 Evaluation Study of 2,874 students in fifth grade (*Classe 7*), the last year of primary school. In May, 1991, these students from 181 schools were tested in Malagasy, French, and Mathematics using tests based on the Madagascar curriculum. Table 1 shows the average scores and the percentage of students scoring 60% or better in each subject. The average scores range from 56% in Malagasy to 48% in Mathematics. In Malagasy, but not in French, the students performed 11 points better, on average, in reading than in writing. In Malagasy, but not in French, the students performed 11 points better, on average, in reading than in writing. If the exclusion of isolated schools from the sample is taken into account, probably less than half of the small number of the pupil cohort who reach the last year of primary school currently fulfill the curriculum's objectives in Malagasy, French, and Mathematics.

Table 1: MADAGASCAR: Test Results of Pupils At End Year of Primary School, May 1991 (N=2874)

| | Average Score | % Scoring 60% or Better |
|---|---|---|
| Malagasy (Language) | 56% | 40% |
| French | 54% | 30% |
| Mathematics | 48% | 23% |

Source: Robin, et al. "*Evaluation des Acquis des Elèves en fin de T5*." Paris: *Ministère de l'Education Nationale et de la Culture*. September, 1992, pp. 32-36.

Results on the CEPE, the primary school leaving examination, suggest a similar conclusion, though the results are not standardized. Nationally, until the mid-eighties about half of the students taking the CEPE examination passed it. Starting in 1984 pass rates fluctuated between 30% and 40%, except in 1987 when the rate was again near 50%. The rate dropped to 22.7% in 1989, the last year for which examination results have been released. Among the twelve primary schools in the Quality Study, three of the schools had pass rates of over 70% and five of them had rates of 20% or less, suggesting wide disparities among schools. From this study, the disparities appear to be partially explainable by irregularities in test administration that local

responsibility for the examination may encourage, suggesting that better standardization of the primary-school-leaving examination is desirable for monitoring system performance.

Both of these sets of information on primary school learning outcomes suggest that the quality of primary education is weak. The fact that only about 30% of the entering students even reach grade 5 adds to the concern about quality of outcomes, as one may question what those who leave earlier have learned. Only about 15% of the age-group is leaving school with learning achievement at primary level or better, which is totally inadequate. This generation is the first in Madagascar since independence to be worse educated than their parents.

*School Process Elements*

*Leadership and Pupil Expectations.* The field observations in the Quality Study found that the school directors in better schools pay attention to order and discipline and make teacher assignments carefully. On the other hand, in almost all of the schools the other indicators of leadership are weak: there is no evidence of school goals being articulated and shared; there is scant evidence that students are being rewarded for success other than through annual award ceremonies; and the bulk of the observations made of valuing students' efforts and giving them meaningful responsibilities were found in individual teachers' classes. It appears that the expectations that are set by the school leadership, even in good schools, reach the students through individual teachers. Where the head's attention to the orderliness of school life and administration encourage teachers to hold high expectations for students and to reward them, students' results should be better.

From the Evaluation Study there is even stronger evidence that the expected relationship between school leadership and academic success is valid for Madagascar's primary schools. That study found that the schools with better test results had directors with a higher personal investment in the school in terms of their availability in the school, their attitudes about their responsibilities, their control of the school, and their ability to motivate people. In the national seminar, held in March 1994 to discuss the primary school results of the Quality Study, national educational leaders corroborated the importance of the school director. However, the Quality Study itself concluded that none of the school directors in the small sample paid direct attention to supervising teaching or stimulating improvements in teaching practice. Instead, school heads are loaded with the administrative responsibilities which, when they handle them well, allow teachers to be more effective with students. These studies suggest that classroom practice, teacher collaboration, and delegation of responsibilities to students are left almost entirely to the teachers.

*The Capabilities and Attitudes of Teachers*. The teaching force in Madagascar has, for the most part, an adequate minimum formal preparation and experience. With the exception of two schools out of twelve in the Quality Study, all of the teachers had initial teacher training, and in those two schools, 80% of the teachers had had training. However, only four schools had at least one teacher with the *Certificat d'Aptitude Pédagogique* (CAP), the highest professional qualification for primary level teaching. Similarly, all but a few teachers in these schools had been on the job for at least two years. In the Quality Study, training and years of service were not found linked to outcomes. However, the achievement and wastage studies found a connection between formal teacher competencies and student outcomes, whether achievement or dropout. The Wastage Study found that schools with better-prepared teachers have less dropouts, and the Evaluation Study found that length of service and length of time in current post contributed to higher student competencies. Interestingly, both studies also found that female teachers obtain better results than male teachers. Using its teacher interview data, the Evaluation Study explains how male teachers usually have numerous obligations, many of them economic, outside their teaching which probably reduces their attention to teaching.

While the studies agree on the presence and importance of basic professional capabilities, teachers' attitudes appear to detract from their performance. The Wastage Study found that teacher absenteeism is higher and the number of hours of teaching per day is less in schools with higher dropout rates. Also, absenteeism without a reason poses a problem in many of the twelve schools in the Quality Study. These conditions suggest that some teachers are not dedicated to their work. Beyond this, in the twelve primary schools in the Quality Study, very few examples of a personal commitment to students -- buying a school blouse for a student, providing writing materials, counseling individuals -- were found.

The Quality Study also found problems in how primary school teachers use their knowledge and skills. First, the majority of the teachers in the study's case schools have great difficulty using French, both for instruction and for communication. Second, there is little evidence of pedagogical collaboration among teachers, the examples found being limited to teachers who teach the same grades in the same school. Third, while the teachers have had teacher training, the skills learned are often applied ritualistically. For example, lesson-planning is done regularly but without being specific to the classes being prepared for. The lack of supervision and staff development by school heads and weaknesses in the teacher training curriculum may contribute to this lack of meaningful application of what was learned in training, but teacher attitudes probably also contribute to weakening the effective application of learned teaching skills.

Even though some teachers teach conscientiously under difficult circumstances, the cluster of teacher attitudes reflected by teachers' attendance, their formalistic approach to work and their impersonal behavior towards students needs greater consideration in planning school improvement. The participants in the national seminar in March, 1994, that reviewed the results of the Quality Study probably realize this as well because they singled out "professionalization" of teachers, along with school leadership, as a critical problem to resolve in order to improve student learning.

*School Infrastructure and Equipment.* Two of the studies analyzed here suggest that in Madagascar the physical facilities of the school contribute to student learning. Attributes that have been found important include the number of classrooms, water and toilet facilities, an adequate-sized compound for recreation and productive activities and equipment (blackboards, desks, other classroom furniture, and tools for productive activities). The physical characteristics of the twelve schools in the Quality Study suggest shortages of facilities: only four of the twelve primary schools had enough rooms for all class sections; four had only half as many classrooms as class sections; and in nine schools sanitary installations were inadequate. The Evaluation Study found most schools had toilets, but only a few had electricity and running water, with the schools that performed well on the achievement tests having significantly better services than those that performed poorly. On the other hand, a Pilot School Mapping exercise in one commune found similar levels of infrastructure availability, but concluded that schools with "mediocre material conditions for schooling" performed well. These mixed findings on the relation of infrastructure to students' results suggests that the relationships that have been found may be more a reflection of community support for both the school and its pupils than a direct cause of success (see below on community support).

School equipment has also been shown to be associated with student outcomes. The findings of the studies used in this analysis suggest that perhaps two-thirds or more of all schools have sufficient blackboards, pupil seats, and other types of equipment. Also, two studies found that the schools that have more and better blackboards, greater numbers of seats for the number of students, and other classroom furniture tend also to have better CEPE examination results (the Quality Study) or higher test scores (the Evaluation Study).

*Learning Materials.* Textbooks, slates, notebooks, and pens and pencils constitute the main pupil learning materials in Madagascar's primary schools. The Evaluation Study and the Quality Study both found that schools do not differ much in the availability of paper and pens for

students, both being available for almost all students. However, only limited numbers of textbooks are available. For example, the Quality Study found that all schools had some French texts (*A Toi de Parler*) for all five grades which were provided by French Cooperation and sets of newly-arrived grade 1 Malagasy texts (*Garabola*), written with German technical and financial assistance and published and distributed using a World Bank credit. Not one mathematics textbook was found in any of the twelve schools studied, and nine of the schools had insufficient numbers of teachers guides for the texts that they did have. Both the Evaluation and the Wastage Study found that schools with better test scores or lower dropout rates had more books for their pupils than schools that performed less well. Even with limited textbook availability, it is noteworthy that the presence of textbooks seemed to differentiate schools with good and poor results.

*The Teaching/Learning Process*. The only study to look directly at the teaching/learning process has been the Quality Study. In this study, between two and six classes were observed in each school to get a sense of how efficiently class time is used, what the diversity of teaching methods are, how students are evaluated, and how frequently homework is given and checked. Recognizing its informal method of classroom observation, the study concluded that there is some diversity of teaching methods, though it is limited by the paucity of materials and the teachers' lack of imagination. The study also found that in the higher grades teachers tend to use a more formal, expository, teaching approach than in lower grades. Conclusions were not reached about homework and about how efficiently class time was used, though a few examples of good practice in both these areas were found. Generally, the study indicates that teachers know the basic teaching skills, but they are not being challenged to use them effectively or creatively or to grow in the practice of their profession.

*Supporting Input Elements*

*Government and Community Contributions*. While neither of the quantitative studies reviewed looked directly at communities' and governments' contributions to schools in the Wastage Study, the multi-variate analysis of the factors contributing to repetition and dropouts indicated that about 20% of the variance in wastage among schools could be explained by family context, including the family's aid to the student. On the other hand, the Quality Study looked at parents' and communities' contribution to the school in terms of money, labor, materials and

participation in school life and at government's contribution in terms of money, building construction and repairs, and teacher development services. Only two of the twelve primary schools received any financial assistance from government beyond teachers' salaries, in both cases a small subsidy from local government; four had help with building and equipment renovations; and seven had received token amounts of materials. Government investments at the primary level have been almost nil.

While all twelve schools reported teachers participating in in-service activities provided by government, these were either short courses on teaching French sponsored by French Cooperation or long-standing regular meetings, called F4, led by local supervisors. Most of the teachers reported that the teacher's meetings are formalistic and/or social and not at all useful for their teaching. Only two of the twelve primary schools in the study reported having a supervisory visit or inspection in the last couple of years, and in both cases there were special reasons why a visit had occurred.

Not one of the twelve schools studied was found to have poor community support. In fact, ten of the communities were classified as giving good material support to the school, including locally-set fees that ranged from 500 Malagasy francs (FMG) to 3000 FMG per year ($US1 = about 1900 FMG). The uniformity of community support across all twelve schools, when the academic results of the schools varies widely, leads to the counter-intuitive hypothesis that community support is not important to learning outcomes. However, two key factors that do differentiate schools -- leadership and infrastructure -- derive their significance from interplay with parents and the community. First, as has been found, the variety in facilities and equipment among the schools derives from the communities' participation. If good school results are related to the infrastructure, it is because community support exists to create and maintain the infrastructure. Similarly, a school director's influence on outcomes can be expected to be stronger through interaction with the community supporting it. As was noted, the Evaluation Study found that school heads in good schools tended to be available in the school and to be able to motivate people. Both of these attributes add depth and quality to the relationship between a school and

the community. For both the key factors of leadership and of infrastructure, there is justification to conclude that they are important for school effectiveness in concert with support from the community.

The Quality Study concluded that "parents assure the life of the school," and "there's not much of a contribution by government" (other than salaries). Since the schools in this study were all near to or in the larger regional cities, this picture of very little government participation in public schools is probably even more true for rural areas. As the study found, the absence of government support, other than salaries, leaves the supply of school infrastructure, equipment, and pupil supplies to the parents and the community. Where parents are keen on the education of their children, more material support for education will be found. The finding that good facilities and equipment contribute to better academic results is probably, in fact, a proxy for the broader influence of parental and community support for primary education.

## POLICY IMPLICATIONS

These findings on school quality have helped clarify the elements of a strategy for improving the quality of primary education within Madagascar's larger economic development framework. At the primary level particularly, where comparative research results allow for conclusions about policy, the elements to focus on for revitalizing the system include strengthening school leadership, providing more learning materials, and fostering community support. The World Bank sector study also concludes that for the changes to occur at the primary level, other policies need to support the foci identified in the research. First, it is necessary to create and sustain a positive climate for the reform of education. Second, primary and secondary education need to be favored over higher education in budget allocations. Third, recurrent budget allocations should favor instructional purposes (at the cost of administrative expenses). And fourth, working through communities, investments need to be made in more and better facilities and equipment.

## CONCLUSION

The research in Madagascar that has been reported on here has provided a link between the body of research literature on school effectiveness and improvement and the complex policy issues confronting a Third-World education system in decline. A number of connections that were established in this work have contributed to its utility in Madagascar.

First, by providing a structured conceptual framework that summarizes the research on school effectiveness and school improvement, Malagasys had an accessible summary that could be comprehended and digested within the constraints of time and isolation. They were further aided in their work in that, from the beginning, they used the conceptual framework to inform their reflections on their own experience in preparing the *Guide d'Observation*, rather than trying to fit their experience to this imported framework.

Second, the reliance on experience was further valued by the adoption of a qualitative observational research methodology which allowed experienced educators with limited formal research experience to engage in the research process. This reliance on personal experience, both from the educators' own careers and from the field work for the case studies, carried over into the processing and analysis of the field data. Only towards the end of the analysis were the quantitative studies' results used to confirm or refute the tentative conclusions that were formulated through the researchers' own direct experience in schools.

Finally, the overall approach has brought the international literature on school effectiveness and improvement directly into the policy dialogue in Madagascar. With a World Bank sector report available that talks at length about what goes on in schools in Madagascar based on formal observations and analyses done by Malagasys, the decision-makers on both the donors' and Government's sides have been forced to take into account the factors at the school level that the research has shown to be important. Even though the results of the policy dialogue are not yet apparent, that this process is being informed by local research findings such as those described here leads us to argue that the methods used in Madagascar should have applicability elsewhere.

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# APPENDIX 1

## Examples of School Effectiveness Factors, Definitions and Generic Indicators

Table 1.3 Supporting Inputs: Adequate Material Support

| Adequate Material Support | |
|---|---|
| *Definition*: Material support for a school is adequate for effectiveness when:<br>1. Textbooks and other reading materials in an appropriate language with relevant contents are available in sufficient quantity for all children to use them.<br>2. Teachers have guides that outline what to teach and how to teach it and that provide diagnostic and evaluation materials to use with students.<br>3. Students have sufficient paper and implements to adequately practice what is taught.<br>4. The school has enough classrooms to accommodate classes of teachable size.<br>5. Classrooms are equipped with blackboards and chalk, enough desks to seat all the children, and visual aids that support instruction. | |
| **Requirements** | **Indicators** |
| 1. Textbooks and other reading material | a. All children can identify their textbook (even if shared) and accurately describe its contents.<br>b. All children can name other reading material, know where to find this and can name the last thing they read. |
| 2. Teacher guides | a. All teachers can show someone the Teachers' Guide that they use and explain how they use it.<br>b. The Teachers' Guide contains material on subject matter, how to teach it, and means of evaluation. |
| 3. Paper and writing implements | a. Children have with them a notebook (or notebook sections) for each subject and an effective writing implement. |
| 4. Classrooms | a. All classrooms accommodate comfortably class sizes at the government norms, and there are enough classrooms to accommodate all enrolled students for these class sizes. |
| 5. Classroom equipment | a. There is a usable blackboard and sufficient chalk.<br>b. There are enough desk places so that all students enrolled in the class have a place. |

Table 2.1 Enabling Conditions: Effective Leadership

| Effective Leadership | |
|---|---|
| *Definition*: Effective leadership exits in a school when:<br>1. The Head sees that the resources are available to provide adequate support to teachers, sufficient learning materials, and an adequate and well-maintained learning facility.<br>2. The Head actively pursues high instructional standards by:<br>a. clearly and frequently stating in concrete terms the school's mission, curricular goals and expected teaching behaviors.<br>b. clearly and frequently expressing high expectations of pupils and the school's focus on learning as its central purpose.<br>c. coordinating and managing the learning process.<br>3. The Head communicates regularly and effectively with teachers, with parents and others in the community.<br>4. The Head maintains high visibility and accessibility to pupils, teachers, parents and others in the community. | |
| **Requirements** | **Indicators** |
| 1. Necessary resources are available | a. Teachers have adequate compensation in whatever form, to concentrate on teaching.<br>b. Teachers and pupils have adequate materials (textbooks, paper, pencils, chalk, supplementary materials and equipment) to be able to vary teaching methods.<br>c. Class size and classrooms correspond to government mandated norms.<br>d. School buildings and grounds are maintained attractively and water is available. |
| 2. High instructional standards are pursued | a. The Head's conversations and presentations regularly refer to confidence in student abilities and to learning.<br>b. The Head can describe the school's curricular goals and the classroom behaviors that he/she believes constitute good teaching.<br>c. There are minima[illegible] disruptions to learning time (e.g. administrative assemblies, long recesses, and teacher tardiness to class and absenteeism).<br>d. The Head and Deputy Head/s frequently visit classrooms and hold development conferences with teachers.<br>e. The Head frequently reviews pupil performance (by level, and by subject).<br>f. The Head frequently reviews teachers, and their curriculum programs. |
| 3. Regular and effective communication with teachers, parents and the community | a. Staff meetings are frequent and productive.<br>b. Communication with teachers is frequent and constructive.<br>c. School public events are frequent and productive.<br>d. The Head's involvement in community activities outside the school is frequent and constructive. |
| 4. High visibility and accessibility | a. The Head's involvement in community activities outside the school is frequent and constructive.<br>b. The Head's interaction with individual pupils and school assemblies is frequent and constructive.<br>c. The Head is informally available in the school outside his/her office.<br>d. Parent-initiated contact with the Head is frequent and constructive. |